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Report to the Legislature

September 2001

Status Report

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Natural Resource Damage Settlement Funds for the Upper Clark Fork River Basin

Department of Justice

Department of Environmental Quality

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September 2001

The Legislative Audit Committee
Of the Montana State Legislature:

This is a status report on the use of Natural Resource Damage Settlement Funds for the Upper Clark Fork River Basin. The funds are administered by the Department of Justice and the Department of Environmental Quality.

This report provides updated information to the committee. Prior information was in the form of legislative requests to individual legislators. The report contains no recommendations. This report is informational only and requires no action by the departments involved.

We appreciate the professionalism, cooperation and assistance of agency staff.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Scott A. Seacat", with a long horizontal flourish extending to the right.
Scott A. Seacat
Legislative Auditor

Introduction

Legislative Audit Committee members requested the Legislative Audit Division update legislative request work to inform members of the state's progress in litigating natural resource damage claims against Atlantic Richfield for the Upper Clark Fork River Basin. The request also asked for an update on the use of funds already received by the state under terms of the current settlements and the effect flooding in the Berkeley Pit might have on remediation efforts.

Background

In 1983, Montana filed suit against Atlantic Richfield (State of Montana v. Atlantic Richfield Company, USDC for Dist. of Mt. Case no. 83-317-HLN-PGH) to recover damages for injuries to natural resources in the Upper Clark Fork River Basin caused by over a century of mining and mineral processing. The Clark Fork River Basin corridor stretches approximately 120 miles from Butte downstream to Milltown, just east of Missoula.

Following some preliminary legal discovery proceedings, in 1984 the U.S. District Court ordered the proceedings in the case temporarily stayed. In 1989, the court granted Atlantic Richfield's motion to lift the stay, after which Montana proceeded to develop a natural resources damage assessment documenting injuries to natural resources and damage claims for such injuries. In 1993, at the request of the parties, the court again stayed the proceedings in this case for the purpose of settlement negotiations. The negotiations were unsuccessful. After further discovery, the trial of Montana vs. Atlantic Richfield began in 1997. At trial, Montana presented evidence regarding Atlantic Richfield's liability and natural resources injuries that were incurred due to the release of hazardous substances from Atlantic Richfield's and predecessors' mining and mineral processing operations. Settlement negotiations continued throughout the trial and, on June 19, 1998, the parties announced a proposed settlement set forth in a consent decree.

The Settlement

The settlement establishes a two-step process for the settlement of all of Montana's natural resources damage claims against Atlantic Richfield. The first step settles a majority of Montana's damage claims, including its claims for assessment and litigation costs

through December 31, 1997, all of its compensable damage claims, and restoration damage claims for six areas in the Upper Clark Fork River Basin.

Atlantic Richfield paid to Montana, through direct payments and a land transfer, a total of \$215 million, plus interest. Under the settlement terms, Atlantic Richfield paid:

- ▶ \$15 million to reimburse Montana for its damage assessment and litigation costs through December 31, 1997.
- ▶ \$118 million in cash for natural resource damages to be used for restoration or replacement of injured resources or lost services.
- ▶ Convey real property along Silver Bow Creek valued at \$2 million.
- ▶ \$80 million to be used for the remediation of the Stream Side Tailings Operable Unit (Silver Bow Creek – extends from the West end of Butte 22 miles to the Warm Springs Ponds – see Appendix 1).
- ▶ Pay interest to the state on each of the above amounts from April 6, 1998, through the dates of payment.

In consideration of the \$15 million payment, Atlantic Richfield received a release of liability for Montana's claims for assessment and litigation costs incurred through December 31, 1997.

The second step of the settlement process addresses the state's restoration damage claims for three remaining sites (not included in the \$215 million). These claims are not settled because at the time the settlement was reached, the record of decision setting forth the U.S. Environmental Protection Agency's (EPA) chosen remedy for each of the sites had not been issued. These sites relate to natural resource damages in the Anaconda Smelter Hill upland area, the Clark Fork River area, and the Butte area alluvial aquifer. The total damage estimate for these three sites is approximately \$180 million. The Smelter Hill upland area amount is \$15.5 million. Claims for the Clark Fork area are estimated at \$86.4 million. Claims for the Butte area alluvial aquifer are estimated at \$79.5 million.

Settled for Less Than Estimated Damages

In addition to the Step Two sites, Montana reserves the right to sue Atlantic Richfield to recover damages for injury to natural resources caused by the release of hazardous substances due to unanticipated, extraordinary actions such as the failure of the Warm Springs ponds dam or the Milltown reservoir dam.

The state's original total estimate of damages was \$765 million. This amount was compiled from the state's evaluations of possible claims. These claim amounts were used in the lawsuits to obtain a settlement.

Department of Justice documents indicate that Montana would have preferred to recover the full amount of the damages claimed against Atlantic Richfield, but there are several reasons why it settled for less. First, there are no guarantees any litigation would produce an eventual recovery or would produce the recovery sought. In this complex case, there were litigation risks associated with claims and defenses.

While the Department of Justice believed in all aspects of its case, the department stated it would have been derelict in its responsibilities not to recognize the possibility the court, or courts, would not completely concur in Montana's view of the facts and law. Recovering set amounts, and interest on those amounts, via a settlement removed the uncertainty associated with litigation. Second, any recovery of damages through litigation could be years away, depending on rulings from the District Court and then, in all likelihood from an appellate court. The recovery of moneys in the near-term enabled Montana to start making definite plans to address natural resource injuries sooner rather than later. The settlement also ended some of the need for the state to fund future litigation costs. As mentioned previously, the settlement is only partial. Montana is reserving three of its restoration cost claims, valued at a total of approximately \$180 million.

The following summarizes the dollar amounts of the claims and what was actually received. The total damage claim requested (as of January 1, 1997) was \$764.5 million.

Breakdown

Enforcement and Assessment Costs:	\$ 12.3 million
Compensable Damages Claimed:	\$410.5 million
Restoration Cost Damage Claim:	<u>\$341.7 million</u>
Total:	\$764.5 million

Compensable Damages

Various studies were used to calculate compensable damages. Each of the studies used different techniques and analyzed all forms of compensable damages. Because there was overlap in the uses and services that were evaluated, the sum of all the reports could not be used. The state considered all the studies and removed overlapping damages. The total amount was \$410.5 million.

Restoration Cost Damages

Step One Sites (\$135.38 million):

Butte Hill - (replacement of water sources):	\$ 54.50 million
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Milltown Dam - (remove contaminants using natural recovery):	\$ 1.20 million
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Silver Bow Creek - (restore aquatic and riparian resources):	\$ 57.80 million
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Montana Pole (Butte) - (removal of structures and soil):	\$ 19.47 million
--	------------------

Rocker Timber Plant - (natural recovery and monitor):	\$.67 million
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Opportunity Ponds - (natural recovery):	\$ 1.74 million
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Step Two Sites (\$206.30 million):

Smelter Hill Upland Area - (re-vegetation, planting, natural recovery):	\$ 40.37 million
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Clark Fork River - (remove contaminants; restore riparian resources):	\$ 86.42 million
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Butte Ground/Surface Water - (remove waste sources; reduce releases):	<u>\$ 79.51 million</u>
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Total:	\$341.70 million
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Comparison of Claimed to Actual

There cannot be an "apples-to-apples" comparison of the amounts claimed to the settlement amounts. The claims were estimates of the damage amounts. The settlements are based on testimony, discussion, analyses, and negotiation. The settlements are also affected by settlements in other areas (i.e. settlements in Step One sites could affect claims in Step Two sites).

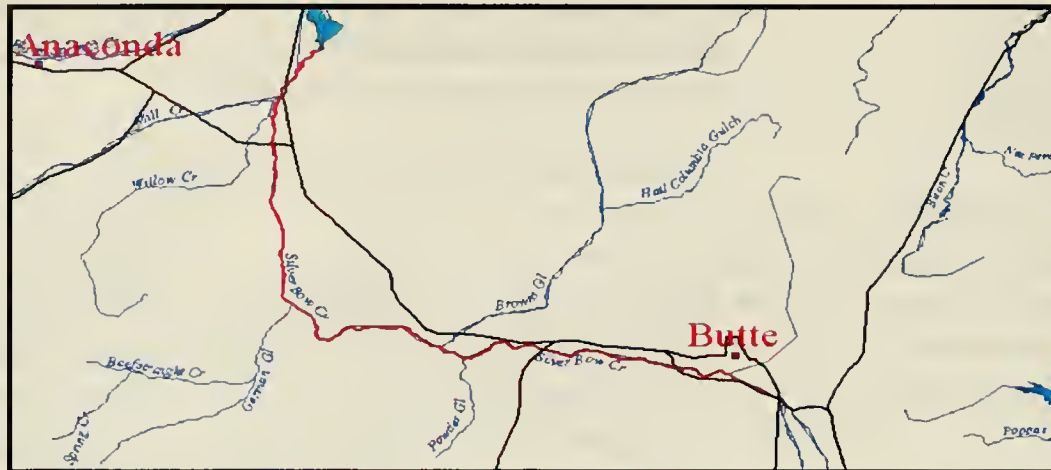
A general comparison can be made. In summary:

<u>Amounts:</u>	<u>Initial Estimates:</u>	<u>Settlement* and Current Estimates:</u>
Compensable Damages	\$ 410.50 million	\$ 215.00 million*
Restoration Cost Damage	\$ 135.38 million	(included in \$215 million)
Enforcement/Assessment	\$ 12.30 million	(included in \$215 million)
Step Two Sites	\$ <u>206.30 million</u>	\$ <u>180.00 million</u>
Total	\$ 764.50 million	\$ 395.00 million plus interest

Payments

In November 1998, another consent decree was entered into between the state of Montana, the United States, the Atlantic Richfield Company (ARCO), and the Confederated Salish and Kootenai Tribes. This decree settled certain additional claims and provided for implementation of the remedy for the Streamside Tailings Operable Unit (Silver Bow Creek/Butte Area). The Tribes became parties due to the Hellgate Treaty which granted the Tribes use of usual and customary fishing areas that included the UCFRB.

Figure 1
Silver Bow Creek



The settlement involves, among other things, payment by ARCO of \$80 million, over a period of three years. Those funds and the earnings from the investment of those funds are to be used by the state and EPA for the purpose of remediating the mine waste contamination at the Streamside Tailings Operable Unit over an estimated twelve-year clean-up period. Any funds, including earnings, which are not ultimately required for the remediation of the Streamside Tailings Operable Unit can be used by the state for natural resource restoration purposes.

The scheduled ARCO Streamside Tailings Operable Unit payments into the "Tailings Fund" are:

March 1999	\$15 million (paid)
July 1999	\$15 million principal plus interest (paid)
July 2000	\$25 million principal plus interest (paid)
July 2001	\$25 million principal plus interest (paid)

Interest payments by ARCO on these amounts totaled \$12,785,534.

In addition to payment of assessment and litigation costs in the

amount of \$15 million and transfer to the state of \$2 million worth of land, ARCO agreed to pay the state \$118 million, plus interest. The interest to be paid by ARCO was based on the yield of the state's Trust Fund Bond Pool. The settlement amount is for environmental damages arising from injuries to the state's natural resources in the Upper Clark Fork River Basin (UCFRB). The settlement amount and the interest thereon are to be deposited in the UCFRB Restoration Fund and may be used only to restore, replace or acquire the equivalent of the natural resources which were injured as a result of ARCO's and its predecessors releases of hazardous substances.

In July 1999, ARCO paid the state \$129,348,156. This payment included the \$118 million principal due plus interest. An amount of \$119,348,156 was deposited into the UCFRB restoration account. Ten million dollars was deposited into a reserve account. The Department of Justice instructed the Board of Investments to establish a separate \$10 million account that will include all future earnings. This money may be needed to complete the remediation of Silver Bow Creek under the Streamside Tailings Operable Unit (SSTOU) Record of Decision and the related consent decree. If this money is not needed for the SSTOU remediation, it will eventually be used for natural resource restoration. This money was placed in long-term investments because withdrawal is not likely to occur during the next ten years.

Investment of Settlement Funds

The Montana Board of Investments is administering the settlement funds, which are split among a variety of investments. These funds include short-term investments and long-term investments through the Trust Fund Bond Pool. The majority of the settlement funds are invested in the bond pool, which typically yields 7 percent interest. Interest revenue through June 2001 from the restoration fund has totaled approximately \$19.0 million. The state's current policy regarding available restoration funds is that only interest earned on the principal in the coming years will be expended, unless the trustee finds it is essential to use the principal to fund significant or time critical projects. Interest earned by the state on the Streamside Tailings fund has totaled approximately \$8.1 million through

June 2001. The Board of Investments is also investing moneys from the Silver Bow Creek Reserve Fund discussed on page 12.

Settlement Distribution

The settlement is to be used to address both restoration and compensatory damages. The moneys must be used for restoration and/or replacement of the injured natural resources and the services the resources provided. Even though there is a difference between restoration and/or compensatory damages, there is no allocation of the settlement amount between the types of damages.

The settlement itself does not specifically allocate money to certain areas. The state of Montana determines how the moneys are to be spent using an established process and public input that is in accordance with federal regulations. The UCFRB will be the site of most, if not all, expenditures of settlement moneys. The Governor is the trustee for natural resources for all the citizens of Montana and, in this lawsuit, sought compensation on behalf of all of its citizens. Local communities such as Butte and Anaconda could not assert trusteeship for natural resources, and therefore could not seek direct compensation for injuries to natural resources. As the trustee for natural resources of Montana, the Governor represents all of the citizens of Montana in this case.

In 1990, Governor Stephens formed a Natural Resource Damage Program Policy Committee ("Policy Committee") consisting of state officials to advise him on matters concerning the ARCO lawsuit. The 1991 Legislature ratified this arrangement, directing the Policy Committee to "guide and make natural resource damage litigation program policy recommendations." The members of the Policy Committee are the Governor's Chief of Staff and the directors of the Departments of Environmental Quality, Fish, Wildlife and Parks, and Natural Resources and Conservation. The Attorney General serves as an advisor to the Policy Committee. The Policy Committee with the addition of the chairman of the Advisory Council (described below), also acts as the "Upper Clark Fork River Basin Trustee Restoration Council" and is responsible for recommending to the Governor annual restoration work plans to be funded with the natural resource damages recovered by the state in Montana v. ARCO.

The Upper Clark Fork River Basin Remediation and Restoration Education Advisory Council has been appointed by the Governor to advise the Governor on the expenditure of the recovered funds. The public has an opportunity to make suggestions for and comments on expenditure proposals. The Advisory Council consists of the following members. Public members must reside in the area affected by the NRD litigation, more specifically described as the Clark Fork River Basin, from Butte to Missoula:

- ▶ one businessperson;
- ▶ one conservation district representative;
- ▶ two local government representatives;
- ▶ one engineer;
- ▶ one member of the public active in conservation or recreation;
- ▶ one local natural resource scientist;
- ▶ one local planner or local development specialist;
- ▶ one representative of a non-profit organization, a purpose of which includes protection of environmental values in the Clark Fork Basin; and
- ▶ one interested member of the public who does not represent one of the interests described above.
- ▶ Director of the Department of Environmental Quality (DEQ), or the Director's designee;
- ▶ Director of the Department of Fish, Wildlife and Parks, or the Director's designee;
- ▶ one representative of the Natural Resource Damage Litigation Program designated by the Attorney General;
- ▶ one representative of the Confederated Salish & Kootenai Tribes, designated by the Tribal Chair; and
- ▶ one representative of the United States Department of the Interior, designated by the Secretary of the Interior.

Expenditures

The Streamside Tailings Consent Decree involves the "Silver Bow Creek Clean-up Project." The expenditures to the end of fiscal year 2001 for this remediation action were at about \$7.4 million. The expenditures were made from the \$80,000,000 of the settlement portion of the payments from ARCO.

The following summarizes the expenses for the Silver Bow Creek Clean-up. The chart presents all expenses through June 30, 2001. Contracted services make up \$6,472,581 of the total.

Table 1

Expenses for Silver Bow Creek Remedial Action through June 30, 2001

General:

EPA Payback	\$ 383,764.00
Repay State Match	\$ 17,365.00
General DEQ Administration	\$ 241,777.38
General Design	\$ 409.69
Real Estate Acquisition	\$ 8,200.30
NRDP Grant – Greenway	\$ 348.68

Sub-Area 1 (First mile and half of creek):

Sub-Area 1 DEQ Administration	\$ 3,746.15
Sub-Area 1 Design	\$ 742,885.22
Sub-Area 1 Construction	\$ 5,897,395.50
Sub-Area 1 Land and Utility	\$ 39,449.50
Sub-Area 1 Monitoring	\$ 45,910.41
Sub-Area 1 Operation and Maintenance	\$ 2,874.50
Sub-Area 1 Floodplain Compost	\$ 42,527.55

Sub-Area 2 (Next two and one half miles):

Sub-Area 2 Design	\$ 46,391.37
Sub-Area 2 Land and Utility	\$ 269.98

Total	\$ 7,473,315.23
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Silver Bow Creek Clean-up

The remediation action on Silver Bow Creek involves removing contaminants from the creek and floodplain, hauling the contaminated soil to a designated site for permanent storage, rerouting the stream during construction, reconstructing the stream channel and banks, and revegetating the area. The state made

payments to the EPA for planning and design work for the project. The design work was done prior to the state receiving the payments. The payments to the EPA were based on three cooperative agreements between the state and the EPA.

The cost of applying floodplain compost to Sub-Area 1 was reimbursed in February 2001 from the UCFRB Restoration Fund as part of a grant issued to enhance re-vegetation of the Silver Bow Creek Reach.

Bid Process

A competitive bid process based upon a time and materials was established by the Department of Environmental Quality. The EPA and the state used a request for proposal to solicit bids. They accepted proposals for design of the cleanup project, which included dredging tailings out of the creek and flood plain. The proposals incorporated estimates of the quantities and reclamation necessary. They also included what the creek will look like, the seed type, etc. The department formally advertised for bids for the construction phase of the first areas using sealed bids. A consulting firm performed an independent third party review of the design to see if the construction is appropriate and legitimate.

The following pictures show: 1) Silver Bow Creek prior to the reclamation work; 2) Construction on the first stretch of the creek; and 3) Silver Bow Creek shortly after completion of the first stretch.

Figure 2

Silver Bow Creek Prior to Reclamation Work
(DEQ Photo – September 1999)



Figure 3

Construction on the First Mile of Silver Bow Creek
(DEQ Photo – November 1999)



Figure 4

Early Stage of Completed Work on the First Mile of Silver Bow
Creek (DEQ Photo – July 2000)



**Silver Bow Creek Reserve
Fund**

There is also a Silver Bow Creek Reserve Fund. No expenditures have been made from this fund. The book value of the fund is approximately \$11.5 million. Ninety nine percent of these funds are invested in the bond program. If, in the future, it is determined that this money is not needed for Silver Bow Creek remediation activities, it will be transferred to the UCFRB Restoration Fund.

UCFRB Restoration

Based upon NRDP staff recommendations, the Advisory Council established recommendations for the initial expenditure of UCFRB funds. The funds are allocated in the form of grants totaling \$7 million dollars. As of July 1, 2001 the restoration fund balance was approximately \$132 million. As of July 2001, expenditures on the pilot projects totaled about \$4.5 million.

Restoration fund expenses totaled approximately \$5.2 million from January 1998 through July 2001. The Montana Department of Fish, Wildlife and Parks expended \$90,653 for wetland/riparian enhancement on Warm Springs Creek rehabilitation activities. Advisory council expenses totaled just over \$63,595. A large portion of this, approximately \$34,000, was reimbursement to the Department of Environmental Quality for its administrative support to the council. The Montana Department of Justice Natural Resource Damage Program restoration expenses totaled just over \$622,077.

The Natural Resources Damage Program was restructured after the partial settlement by dividing the program into two components: litigation component and restoration component. The restoration component has two positions primarily working full-time handling responsibilities associated with developing and implementing the new restoration grants program. Before the settlement there were a total of nine authorized full-time equivalent employees. One position was vacant. After the settlement total staff remains nine authorized full-time equivalents. They are one supervising attorney, one other attorney, one restoration program chief, three research specialists, one administrative officer, one secretarial position, and one vacant clerk position. The restoration program chief and administrative officer work almost exclusively on restoration activities. In the past six months, 64 percent of the staff time was devoted to restoration activities and 36 percent to litigation activities.

A breakdown of restoration program expenses by fiscal year follows.

Table 2

TOTAL UCFRB RESTORATION FUND EXPENSES (1/1/98 – 6/30/01)

Breakdown	FY98-FY99 (1/1/98 – 6/30/99)	FY00 (7/1/99 – 6/30/00)	FY01 (7/1/00 – 12/31/00)	Total
NRDP Restoration				
Personnel	\$ 82,137	\$ 156,153	\$ 221,889	\$ 460,179
Operating	\$ 25,870	\$ 51,299	\$ 84,479	\$ 161,649
Advisory Council	\$ -	\$ 38,349	\$ 25,246	\$ 63,595
FWP Wetland	\$ -	\$ 49,653	\$ 41,000	\$ 90,653
Land Transfer	\$ -	-	\$ 250	\$ 250
Subtotal	\$ 108,007	\$ 295,454	\$ 372,864	\$ 776,326
NRD Grants	-	-	\$ 4,510,783	\$ 4,510,783
Total	\$ 108,007	\$ 295,454	\$ 4,883,648	\$ 5,287,109

Source: NRDP staff.

Initial Grants

In February 2000, the state started its Pilot Year 2000 grant cycle. The Natural Resource Damage Program (NRDP) administers the Restoration Grant funding process. The state used the first year as a pilot year to test the planning process it devised. The state established restrictions for the Pilot Year 2000 grant cycle that limit grant funding to \$7 million, limit the number of funded projects to less than twenty, and require demonstration of pilot year "urgency." Restoration grant eligibility requirements were as follows:

Applicant Eligibility: Governmental and private entities and private individuals are eligible to apply for UCFRB Restoration Fund Grants.

Project Type Eligibility: Three types of projects are eligible for funding: 1) Restoration projects that will restore, rehabilitate, replace, or acquire the equivalent of injured natural resources and/or the services lost as a result of releases of hazardous substances; 2) Planning projects that involve developing future grant proposals; and 3) Monitoring and

research projects that pertain to restoration of natural resources in the UCFRB.

Project Location Eligibility: Projects that are located in the UCFRB are eligible for funding at this time. Activities associated with research projects do not have to occur within the UCFRB, provided the proposed research project pertains to injured natural resources in the UCFRB. Projects intended to restore native trout in the UCFRB, but cannot from a practical or economic standpoint, may be located in the Big Blackfoot River watershed.

In April 2000, the state received 13 Pilot Year 2000 grant applications for a total funding request of \$10,647,091. The NRDP screened the 13 applications for minimum qualifications and determined that four did not meet one or more of the minimum qualifications. The NRDP then ranked the projects in order of preference for funding consideration based on criteria comparisons.

In July 2000, the NRDP submitted a Pre-Draft Pilot Year 2000 Restoration Work Plan (Pre-Draft Work Plan) to the Advisory Council, the U.S. Environmental Protection Agency (EPA), the U.S. Department of Interior (DOI), the Confederated Salish and Kootenai Tribes (Tribes), and any other interested parties. The Pre-Draft Work Plan contained the NRDP's grant evaluations and funding recommendations.

In August 2000, the state issued the Draft Pilot Year 2000 UCFRB Restoration Work Plan (Draft Work Plan). The state solicited public comment on the Draft Work Plan between September 9 and October 10, 2000. A total of 41 individuals and 24 entities submitted either written comments or provided oral comments at the public hearings held in the UCFRB.

In November 2000, the Trustee Restoration Council considered public comments on the Draft Work Plan and the NRDP's draft response to these comments in making final funding recommendations to the Governor. The Council recommended \$6,935,208 be approved for Pilot Year 2000 Restoration Grants.

In December 2000, Governor Racicot considered the Trustee Restoration Council's final funding recommendations and the input from various individuals and entities on the Draft Work Plan and the Pre-Draft Work Plan. The Governor approved the Council's final funding recommendations.

The following are the eight projects and approved amounts for funding:

- ▶ \$1,772,758 - Greenway Service District, "Silver Bow Creek Greenway"
- ▶ \$110,800 - Bighorn Environmental, "Enhanced Revegetation of Silver Bow Creek Reach A"
- ▶ \$141,439 - Bridger Plant Materials and Deer Lodge Valley Conservation District, "Development of Acid/Heavy Metal Tolerant Cultivars"
- ▶ \$518,382 - Montana Fish, Wildlife and Parks, "Lost Creek Watershed Project"
- ▶ \$3,764,231 - Rocky Mountain Elk Foundation, "Watershed Land Acquisition"
- ▶ \$10,000 - Rock Creek Trust, "Z-4 Ranch Conservation Easement"
- ▶ \$9,550 - University of Montana, "Technical Assistance for Watershed Restoration Analysis and Planning; and
- ▶ \$608,048 - Montana Fish, Wildlife, and Parks, "Manley Ranch Conservation Easement."

A summary of each project is included in Appendix 1.

Ongoing Activities

Remaining Settlement Areas

In regard to the three remaining areas of the settlement still in negotiations, the state of Montana retains three claims totaling \$181.4 million. There is a claim of \$15.5 million for restoration of the mountainous areas around the city of Anaconda. There is another claim of \$86.4 million for restoration of the Clark Fork River. A third claim is for \$79.5 million for restoration of the alluvial aquifer and Silver Bow Creek in area one in the city of Butte. Of the three remaining sites, the only site for which an EPA Record of Decision has been issued is the Anaconda Uplands site. The EPA Records of Decision for the other two sites are not expected to be issued until 2002.

For the Anaconda Uplands portion, the court set up a schedule for the parties to brief legal issues of liability and ARCO's affirmative defenses with a ruling pending in September or October 2001. If the state prevails, then the trial will be held later in 2002. In the meantime, the state is performing further damage assessment work related to the three sites. This work is necessary in order to update the state's restoration damage reports and claims.

Second Round of Grant Applications

The Natural Resource Damage Program is in its second round of applications for grants from the UCFRB fund. Applications were due by March 16, 2001. Eight grant applications for a total funding request of \$6,526,928 were received. Following the same process of review and public comment as used in the first round, the Governor will approve the successful grants in December of 2001. NRDP staff recommended four of the projects for funding to the Advisory Council in July 2001. After consideration and public input the Council recommended funding five projects for a total of about \$5.2 million. (See Appendix 2 for proposed projects.)

Silver Bow Creek

In March 2001, the Department of Environmental Quality opened bids for remedial (cleanup) construction of the next two and one-half miles of Silver Bow Creek. This section of work should cost approximately \$5 to \$6 million.

In early 2001 the Department also negotiated to save a significant amount of money while conducting the Streamside Tailings remediation work. They made a contractual arrangement with Rarus Railroad to haul tailings to the Opportunity Ponds site near Anaconda. The tailings will be added to current contaminants in the ponds. There will be no need for lime treatment. The cost savings between this type of contaminant placement vs. construction of an on-site repository (including Record of Decision mandated lime amendment) is estimated at \$826,000.00. This is a cost savings of \$2.26 per cubic yard of material. If they continue rail haul (for the life of the project), at a savings of \$2.26 per cubic yard the overall reduction in cost could be over \$5,000,000.

Berkeley Pit

Contamination of the groundwater in the aquifer and the Berkeley Pit was caused by extensive mining practices over the past 120 years. ARCO's action in 1982 to discontinue pumping and treating water accumulating in the underground minds intensified the contamination. In 1994 (in the Mine Flooding Record of Decision issued by the EPA and the Department of Environmental Quality) it was determined that full cleanup of the bedrock aquifer was technically not feasible. The record of decision requires sources of contaminated water to the Berkeley Pit from the Horseshoe Bend area be re-routed and controlled, groundwater and pit water be carefully monitored, and treatment facilities be constructed and implemented to pump and treat the water before the water overflows into the alluvial aquifer and Silver Bow Creek.

The entire mine-flooding system is being monitored to track water movement and water quality. Water levels are measured every month in the pit and in 13 mine shafts and 58 monitoring wells. Water quality is analyzed twice a year.

When last measured in July 2001, the pit's water level was 5,207 feet above sea level. The water rose an average of just over one foot per month during the year. The water is natural occurring groundwater. It started flowing back into the area in 1982 when the central pump station in the Kelley Mine was turned off. The water in the Berkeley

Pit is acid mine drainage, which is mainly caused by the high sulfur content in the rock in the Butte Hill.

Some pumping and treating has occurred. Water flow into the pit was reduced by about half when a surface stream called Horseshoe Bend was diverted. Horseshoe Bend water is treated with lime and pumped up to Montana Resources' (MR's) tailings pond north of the pit. From there, some of the water was piped down to MR's concentrator for reuse. More than six billion gallons of Horseshoe Bend water had been kept out of the pit. When electrical price increases caused a shutdown of MR's concentrator facilities the Horseshoe Bend water treatment stopped as well. The water began flowing into the Berkeley Pit again.

Pumping and treating of water in the pit must start before the pit water level – or the water level in surrounding mine shafts and monitoring wells – approaches 5,410 feet above sea level. Before the closure of MR's facilities, the water was to approach that elevation around 2021. The EPA and DEQ determined that the water does not pose a threat to human health or the environment as long as it is kept below the 5,410-foot level. If Montana Resources does not re-open, a plant should start treating Horseshoe Bend water in 2003, and Berkeley Pit water treatment should start in 2018, rather than the originally predicted date of 2021. The plant would initially discharge an additional 6 to 10 cubic feet of water per second into Silver Bow Creek. Silver Bow Creek's normal flow is 18 to 20 cubic feet per second. The construction and design of the restored Silver Bow Creek should handle the increased flow.

Above 5,410, the water would not flood Butte by coming up over the rim of the pit. The rim's elevation, at its lowest point, is about 5,510, some 100 feet higher. But above 5,410, closer to the 5,460-foot level – the water could begin to flow away from the pit into the cracks and crevices of the groundwater system below the surface, potentially harming the water quality of local wells and Silver Bow Creek.

Figure 5
Berkeley Pit



The EPA requires design for the treatment plant begin eight years before the water is due to approach 5,410, and the plant must be ready to go four years prior to the projected date. Each year, water level changes are reviewed and the timeline is adjusted accordingly. Updating the timeline is part of the official Record of Decision that spells out treatment requirements. Treatment technology reevaluation is now scheduled for 2004.

Atlantic Richfield and Montana Resources (MR), the company now mining in the Continental Pit adjacent to the Berkeley, are responsible for treating the water, along with other entities affiliated with MR. If they fail to pump and treat the water to keep water levels below 5,410 feet, the EPA can take over the project and charge these companies up to three times the project cost.

Summary

The state of Montana has received all required payments to date including interest. The second step of the settlement process addresses the state's restoration damage claims of approximately \$180 million for three remaining sites. The state of Montana remains in litigation for these areas.

The state has reimbursed various state and federal accounts for the costs of litigation and assessment and has deposited the remainder of the payments with the Board of Investments. The state has used the

funds from the Streamside Tailings account and the Upper Clark Fork restoration account according to the requirements of the settlements. Construction has started and is continuing on the first stretches of Silver Bow Creek near Butte. Grants from the restoration account have been issued to eight projects under the Natural Resource Damage Program. The second round of applications were received by March 16, 2001. A defined process is used to evaluate the grant proposals and the Governor will approve successful grants in December. Initial expenditures in both the Silver Bow Creek Project and the grants have come from the interest earned on the principal from the ARCO payments. The principal remains intact.

The effect of the Berkeley Pit flooding on the Upper Clark Fork Basin project is yet to be seen. The construction of water treatment plants and the pumping of pit water must start before the water level reaches approximately 5,410 feet above sea level. Initial projections estimate that date to be 2021, but with the recent shut down of the concentrator facilities and the subsequent effect on the flow of Horseshoe Bend water into the pit, that date changed to 2018. Each year water levels are reviewed and the timeline is adjusted accordingly.

2000 GRANT CYCLE PROJECT SUMMARIES

Bighorn Environmental Services–Enhanced Revegetation of Silver Bow Creek Reach A.

This proposal presents a funding request for \$110,800 to restore wildlife habitat along Reach A (the first mile) of Silver Bow Creek in the next year. Major components include planting of woody and wetland plants in the floodplain and the addition of organic matter to backfill materials. Restoration revegetation activities will be coordinated with remedy revegetation activities in 2001, with routine monitoring to occur through 2003.

Bridger Plant Materials/Deer Lodge Valley Conservation District – Development of Acid/Heavy Metal Tolerant Cultivars.

This project is a joint effort between the Deer Lodge Valley Conservation District and the Natural Resource Conservation Service (NRCS) Bridger Plant Materials Center (BPMC). This proposal will collect, test, select, grow and plant indigenous native plants that demonstrate superior adaptation to the Anaconda upland area. Foundation seed for the releases will be produced and maintained by the BPMC for distribution to commercial seed growers. The proposal is for \$141,439 over four years.

Greenway Service District – Silver Bow Creek Greenway.

The project would use \$1.77 million to develop a recreational trail corridor and to restore aquatic and riparian resources along the first 3 miles (Reaches A through C) of Silver Bow Creek west of Butte. The Greenway activities on these reaches will be coordinated with remedial actions in 2001 and 2002. The proposal also provides an overview of the planned Greenway efforts for the entire 22 miles of Silver Bow Creek over the next 10-12 years.

Montana Fish, Wildlife and Parks – Lost Creek Watershed Project.

This project involves the rehabilitation of approximately 27 miles of Lost Creek, a significant tributary of the upper Clark Fork River. The project seeks to improve water quality and fish and wildlife habitat through activities such as riparian fencing and grazing management, development of off-stream watering facilities, stabilization or relocation of certain stream segments, streambank revegetation, and creation of fish passage structures. The project is a four-year effort, with activities having begun in 1999, and involves approximately \$1.7 million. The amount requested from the Restoration Fund is \$518,382. There would also be in-kind contributions from six cooperating landowners along the Creek.

Montana Fish, Wildlife and Parks – Manley Ranch Conservation Easement.

The Manley Ranch encompasses 16,000 acres overlapping the Clark Fork-Blackfoot divide in Granite and Powell Counties, about 4 miles northeast of Drummond. This proposal would use \$608,048 in Restoration funds to acquire a Phase I conservation easement in 2001 applicable to 3,416 acres in the headwaters of Morris Creek, a tributary of the Clark Fork River. Project partners are seeking an additional \$2.2 million from other funding sources to acquire easements on the Phase I lands outside of the UCFRB (1,220 acres), Phase II lands (4,484 acres) and Phase III lands (6,800 acres) in the Blackfoot River drainage. These easements will impose restrictions on certain human activities including timber harvest, ranching, and development in order to preserve fish and wildlife habitat, open space, and scenic views.

Appendix 1

Rock Creek Trust – Z-4 Ranch Conservation Easement.

The project is a 2100-acre conservation easement on the Z-4 Ranch in the upper Rock Creek drainage. The easement applies to property that includes portions of the East and Middle Forks of Rock Creek. Stream rehabilitation work will be conducted on the East Fork following finalization of the easement. The easement will impose restrictions on certain human activities including timber harvest, ranching, and development in order to protect open space and scenic beauty, fish and wildlife habitat, water quality, and to renaturalize the streams and their riparian zones. Restoration funds would provide \$10,000 of the \$133,900 easement cost in 2001. Stream rehabilitation costs, which would not use Restoration funds, are estimated at \$125,193.

University of Montana – Technical Assistance for Watershed Restoration Analysis and Planning.

This project involves the use of \$9,550 from the Restoration Fund to design an informational database for UCFRB restoration planners in 2001. The database design will expand on the Montana Natural Resource Information System's (NRIS) statewide watershed information system. The project involves outreach to local watershed groups and conservation districts to determine their database needs and provide training. The end products of this project are conversion of some data sets to a useable form and a recommendation report to NRIS on full database development. This report will identify UCFRB restoration planning needs, available data and data gaps, and the additional tasks and funding needed to develop an informational database.

The Rocky Mountain Elk Foundation - Watershed Land Acquisition.

The Rocky Mountain Elk Foundation (RMEF) holds a purchase option to acquire approximately 32,500 acres in the UCFRB from Y.T. Timber via a phased acquisition over four years. The property is located between Anaconda and Georgetown Lake and includes the bulk of the Warm Springs Creek watershed not already in public ownership. RMEF sought \$6,075,000 in Restoration funds to acquire approximately 9,000 acres for state ownership and management by the Montana Fish, Wildlife and Parks (MFWP). It received \$3,764,2231 for approximately 5,800 acres. These lands consist of two parcels that provide prime wildlife habitat and numerous recreational opportunities – the Garrity Mountain parcel (4,355 acres) and the Clear Creek parcel (1,436 acres). RMEF is also seeking \$13,925,000 from the federal Land and Water Conservation Fund for approximately 23,500 acres for federal ownership and management by the U.S. Forest Service (USFS). The option agreement allows Y.T. Timber to conduct timber harvest activities over seven years subject to the terms of a timber management policy.

2001 GRANT CYCLE PROPOSED PROJECTS

Greenway Service District - Silver Bow Creek Greenway (\$1,206,755)

Develop and construct restoration improvements within the Silver Bow Creek Corridor over the same period established for remedial work. The request is for 1) restoration work in Reaches D and E of Sub-Area 1 of the Streamside Tailings Operable Unit (SSTOU); and 2) a comprehensive plan for the land/easement acquisition requirements for the entire Silver Bow Creek Corridor. The project will restore aquatic, riparian/wetland and uplands ecosystems; acquire and provide public access to a passive recreational corridor; and implement remediation and restoration activities as one project. Tasks include: design and construct in-stream structures and streambank enhancements to promote the restoration of a self-sustaining fishery; amend soils to accelerate growth, vigor and stability of vegetation; plant additional varieties and quantities of native plants to enhance ecosystem diversity; introduce upper story plantings to improve aquatic and terrestrial ecosystems; develop controlled public access to protect the remediated and restored landscape and manage passive recreational activities.

Rocky Mountain Elk Foundation - Watershed Land Acquisition (\$2,065,700)

The Rocky Mountain Elk Foundation (RMEF) applied for a \$6.075 million grant from the Upper Clark Fork River Basin (UCFRB) Restoration Fund in April of 2000 to acquire nearly 9,000 acres of the property for the state of Montana. The Trustee Council recommended, and the Trustee awarded, \$3.764 million in December 2000. RMEF conveyed 5,790 acres to the state of Montana in February 2001. RMEF is now applying for \$2.066 million from the UCFRB to acquire approximately 3,178 acres and complete the state portion of the acquisition. The remaining 23,500 acres is targeted for purchase by the U.S. Forest Service (U.S.F.S.) using Federal Land and Water Conservation Fund (LWCF) dollars. Five million dollars has been appropriated from the LWCF program for 2001 and will be available in the spring of 2001. The state portion of the acquisition is located in close proximity (less than five miles) to the damaged Anaconda Uplands and Opportunity Ponds. Acquisition of the state portion of the property will replace soil, vegetation and wildlife habitat related services lost in the Upper Clark Fork Basin including services lost in the Anaconda Uplands from smelter emissions and lost in and beneath the Opportunity Ponds from hazardous materials. Habitat for the endangered bull trout and the westslope cutthroat trout and spawning areas for brown trout will be enhanced or maintained with the Watershed Land Acquisition. A critical linkage for wildlife between the Flint Range and the Pintlar Range will also be protected from development.

Butte-Silver Bow Government - Drinking Water Infrastructure Replacement (\$1,165,795)

Butte-Silver Bow proposes a fifteen-year program to make essential improvements to the system, particularly the need to replace deteriorated (e.g. leaking, corroded, undersized) distribution lines in the neighborhoods where groundwater use is restricted. The proposed 15-year project would result in a coordinated, annual replacement program to respond to precise areas where deficiencies are creating the most problems. As Phase One of the project, Butte-Silver Bow requests \$1.166 million in NRD funds in 2001, and pledges \$541,000 in matching funds to replace approximately 17,000 feet of distribution lines. Over 15 years, up to 255,000 feet of distribution pipes would be replaced to provide better service to those citizens who cannot use the groundwater. This long-term investment will fulfill essential priorities and also achieve effective coordination with applicable NRDP requirements.

Appendix 2

County Water and Sewer District of Rocker - Rocker Water Reclamation and Habitat Enhancement Project (\$719,566)

The project entails the construction of four wetland ponds and an ultraviolet disinfection system to accept treated wastewater from the community of Rocker wastewater treatment plant. Two constructed wetlands, located above the Silver Bow Creek floodplain, will include lined impoundments planted with indigenous plants accepting disinfected wastewater effluent. Following these two cells, water will flow to two natural wetlands built within the groundwater table, in proximity to Silver Bow Creek. Wastewater will flow from these cells into Silver Bow Creek or seep into the adjacent recharge zone. Local surface drainage will be diverted to the lower two wetland cells, to allow treatment of storm runoff which would normally enter the creek directly. The wetlands will be effective in removing sediments (and metals associated with those sediments) which are carried in the storm drainage. The project construction will be coordinated with the Streamside Tailings Removal Project as well as the Silver Bow Greenway Project in a manner to optimize benefits of all projects and reduce cost. The Rocker project will also include the use of trails, viewing areas, islands and peninsulas to maximize the recreational opportunities of an area that will attract wildlife, particularly waterfowl. Additionally, the District will be upgrading the existing wastewater treatment plant and raw sewage lift station.

Montana Council of Trout Unlimited - Antelope and Wood Creek Riparian Management Project (\$10,000)

The project will improve riparian habitat conditions, stream stability and westslope cutthroat trout habitat on two overgrazed stream reaches. Antelope and Wood Creeks contain genetically pure westslope cutthroat trout and sampling found only native species assemblages in both drainages. The landowner allows public fishing access on both creeks. The riparian management project has two phases: 1.) develop a riparian management system to protect and enhance the overgrazed areas; and 2.) revegetate the riparian areas after livestock exclusion. Phase I included installation of riparian fencing along the creeks and preparation of a grazing management plan, and was finished in 2000 through a partnership among Montana Fish, Wildlife and Parks (FWP), USDA Natural Resources Conservation Service (NRCS) and the landowner. Phase II, revegetation, will take place in Spring of 2002 through the cooperation of Montana Trout Unlimited, FWP, NRCS, Montana Power Company and the landowner. This application seeks funding to complete the revegetation phase of the project.

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